

### REMARKS/ARGUMENTS

Reconsideration and allowance of the above-referenced application are respectfully requested.

Claims 16 and 23 have been amended in accordance with the Examiner's suggestion; thus, it is respectfully requested that the objections relating thereto be withdrawn.

Claims 1, 3, 4 and 47 have also been amended.

#### Rejection of Claims 1, 3-5 and 47 Under 35 U.S.C. 112, Second Paragraph

The Examiner has rejected claims 1, 3-5 and 47 under Section 112, second paragraph.

#### The Examiner's Position

The Examiner contends that claims 1 and 47 are indefinite in the recitation of "an isolated polynucleotide comprising or completely complementary to the nucleotide sequence of SEQ ID NO", as such language is unclear and confusing.

#### The Applicants' Position

The Applicants submit that, in view of the Examiner's concerns giving rise to the rejection, claims 1 and 47 have been amended in order to more fully and clearly elucidate the nature of the invention; thus, it is respectfully requested that the rejection has been overcome and should be withdrawn accordingly.

#### Rejection of Claims 50-53 Under 35 U.S.C. 112, First Paragraph

The Examiner has rejected claims 50-53 under 35 U.S.C. 112, first paragraph.

### The Examiner's Position

The Examiner contends that the specification, while being enabling for polynucleotides encoding the polypeptides of SEQ ID NO:63 or SEQ ID NO:64, does not reasonably provide enablement for polynucleotides encoding polypeptides having elongase activity wherein the polypeptides are at least 70% sequence similar to the polypeptides of SEQ ID NO:63 or SEQ ID NO:64, or polynucleotides encoding polypeptides having elongase activity wherein said polypeptides are at least 60% sequence identical to the polypeptides of SEQ ID NO:63 or SEQ ID NO:64.

### The Applicant's Position

The Applicants respectfully traverse the rejection of claims 50-53 under Section 112, first paragraph.

As stated previously, MELO7 and MEL04 are 58.9% identical at the amino acid level and 67.7% similar at the amino acid level. It should also be noted that MELO7 (SEQ ID NO:64) has 93% identity in a 299 amino acid overlap to the amino acid sequence of HSELO1 (SEQ ID NO:60) disclosed in the application, further supporting the fact that the present invention encompasses sequences having at least 70% similarity or at least 60% identity to SEQ ID NO:64. Consequently, the specification not only encompasses the claimed polypeptide sequences but also related sequences having the claimed amino acid identity or similarity. (One of ordinary skill in the art may readily calculate either percent similarity or identity by comparing the two amino acid sequences of these proteins (i.e., SEQ ID NO:63 and SEQ ID NO:64) or any two proteins.

Additionally, although Applicants' attorney acknowledges that an issued patent does not have

precedential value in connection with a pending application, Applicants' attorney would certainly appreciate the Examiner's consideration of U.S. Patent No. 6,566,583, issued on May 20, 2003.

In particular, claim 1 of this patent recites a nucleic acid encoding an amino acid sequence that is at least 60% identical to the amino acid sequence of (a) (i.e., SEQ ID NO:73). Thus, the percent identity limitation appears to have been allowed based upon an amino acid sequence identity comparison/alignment of the claimed amino acid sequence with the corresponding amino acid sequence (i.e., ORF) from *Vibrio marinus* and *Schizocytrium*.

In the present invention, the polypeptides (encoded by the claimed nucleotide sequences) have at least 60% identity to each other. Further, the amino acid sequence of MELO7 (SEQ ID NO:64) has 93% amino acid sequence identity in a 299 amino acid overlap to the amino acid sequence of HSELO1 (SEQ ID NO:60). It would appear therefore that this comparative sequence data would support the claimed percent identity limitations, as was the case in U.S. Patent No. 6,566,583.

Additionally, claims 50-53 of the present application recite functional activity of the encoded polypeptide, thereby further removing any doubt as to the identity of the sequences falling within the scope of the claims. (Such a functional limitation does not even appear in claim 1 of U.S. Patent No. 6,566,583.)

In view of the above, it is not fully comprehended why there appears to be somewhat of an inconsistency in the manner in which the U.S.P.T.O. has handled the examination related to U.S. Patent No. 6,566,583 versus that of the presently claimed invention. It is therefore respectfully

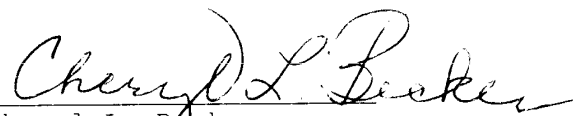
requested that the Examiner provide an explanation as to the differences between the examination and "outcome" relating to the issued U.S. patent and the examination and "outcome" (as set forth in the rejection) relating to the presently claimed invention.

In view of the above, it is submitted that the rejection of claims 50-53 under 35 U.S.C. 112, first paragraph has been overcome and should be withdrawn accordingly.

It is submitted that the subject application is in condition of allowance and Notice to that effect is respectfully requested.

Further, should the Examiner have any questions relating to the above, she is respectfully requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,

  
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